AMENDMENTS TO THE CLAIMS

1. (Currently amended) An optical filter for vision comprising:

an input polarizing element;

an output polarizing element; and

a retarder stack between the input polarizing element and the output polarizing element, the retarder stack comprising $N \geq 2$ retarder films;

wherein the input polarizing element, the output polarizing element, and the retarder stack are at least partially positioned in a field of view and are collectively designed to comprise an FIR filter, and thereby are operable to generate at least N+1 spatially offset light pulses in response to a linearly polarized light impulse input, the FIR filter operable to substantially filter at least one band of light, wherein the optical filter is configured for vision.

2. (Previously presented) An optical filter according to claim 1, wherein

wherein the optical filter is configured for human vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in a human's field of view.

3. (Previously presented) An optical filter according to claim 1, wherein

the optical filter is configured for animal vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in an animal's field of view.

4. (Original) An optical filter according to claim 1, wherein the at least one band of light is an inter-primary band of light.

5. (Original) An optical filter according to claim 1, wherein the at least one band of light has a wavelength that is smaller than or equal to about 400 nm.

6. (Original) An optical filter according to claim 1, wherein the at least one band of light has a wavelength that is greater than or equal to about 700 nm.

7. (Original) An optical filter according to claim 1, wherein the at least one band of light has a wavelength of about 500 nm.

8. (Original) An optical filter according to claim 1, wherein the at least one band of light has a wavelength of about 580 nm.

9. (Previously presented) An optical filter according to claim 1, wherein the FIR filter is operable to filter at least two inter-primary bands of light.

10. (Previously presented) An optical filter according to claim 1, wherein the input polarizing element, the output polarizing element, and the retarder stack filter light so as to maintain a color neutral appearance.

11. (Original) An optical filter according to claim 1, wherein the optical filter is one of a pair of sunglasses, a canopy for a helmet, or a visor.

12. (Previously presented) An optical filter for vision comprising:

an input polarizing element;

an output polarizing element; and

a retarder stack between the input polarizing element and the output polarizing element, the retarder stack comprising $N \geq 2$ retarder films;

wherein the input polarizing element, the output polarizing element, and the retarder stack are at least partially positioned in a field of view and collectively comprise an FIR filter, and are thereby are operable to generate at least N+1 spatially offset light pulses in response to a linearly polarized light impulse input, the FIR filter operable to substantially filter light to improve color deficient vision.

13. (Previously presented) An optical filter according to claim 12, wherein

the optical filter is configured for human vision; and

the input polarizing element, the output polarizing element and the retarder stack, are adapted to be positioned at least partially in a human's field of view.

14. (Previously presented) An optical filter according to claim 12, wherein

the optical filter is configured for animal vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in an animal's field of view.

15. (Original) An optical filter according to claim 12, wherein the light is substantially filtered at wavelengths of about 500 nm and about 580 nm.

16. (Previously presented) An optical filter for vision comprising:

an input polarizing element;

an output polarizing element; and

a retarder stack between the input polarizing element and the output polarizing element, the retarder stack comprising $N \geq 2$ retarder films;

wherein the input polarizing element, the output polarizing element, and the retarder stack are at least partially positioned in a field of view and are collectively designed to comprise an FIR filter, and thereby are operable to generate at least N+1 spatially offset light pulses in response to a linearly polarized light impulse input, the FIR filter operable to substantially filter harmful light rays.

17. (Previously presented) An optical filter according to claim 16, wherein

the optical filter is configured for human vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in a human's field of view.

18. (Previously presented) An optical filter according to claim 16, wherein

the optical filter is configured for animal vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in an animal's field of view.

19. (Original) An optical filter according to claim 16, wherein the harmful light rays are laser light rays.

20. (Previously presented) An optical filter for vision comprising:

an input polarizing element;

an output polarizing element; and

a retarder stack between the input polarizing element and the output polarizing element, the retarder stack comprising $N \geq 2$ retarder films;

wherein the input polarizing element, the output polarizing element, and the retarder stack are at least partially positioned in a field of view and are collectively designed to comprise an FIR filter, and thereby are operable to generate at least N+1 spatially offset light pulses in response to a linearly polarized light impulse input, the FIR filter operable to substantially filter light such that at least two bands of light are substantially attenuated.

21. (Previously presented) An optical filter according to claim 20, wherein

the optical filter is configured for human vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in a human's field of view.

22. (Previously presented) An optical filter according to claim 20, wherein

the optical filter is configured for animal vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in an animal's field of view.

23. (Original) An optical filter according to claim 20, wherein a power spectrum of the input polarizing element, the output polarizing element, and the retarder stack is selected such that color saturation is increased.

24. (Currently amended) An optical filter according to claim [[20]] 23, where the power spectrum is color neutral.

25. (Currently amended) An optical filter according to claim [[20]] <u>23</u>, wherein the power spectrum is selected to improve color deficient vision.

26. (Original) An optical filter according to claim 25, wherein the color deficient vision is color blindness.

27. (Original) An optical filter according to claim 23, wherein the optical filter is a lens.

28. (Previously presented) An optical filter for enhancing vision and/or protecting eyes from harmful light rays comprising a pair of polarizing elements that sandwich a retarder stack, the retarder stack comprising $N \geq 2$ retarder films, the retarder stack and polarizing elements collectively designed to comprise an FIR filter, and thereby operable to generate at least N+1 spatially offset light pulses in response to a linearly polarized light impulse input, wherein the FIR filter has a spectral transmission providing at least one of:

color vision enhancement,

color vision deficiency compensation, or

attenuation of harmful light rays.

29. (Previously presented) An optical filter according to claim 28, wherein

the optical filter is configured for human vision; and

the pair of polarizing elements that sandwich the retarder stack is at least partially positioned in a human's field of view.

30. (Previously presented) An optical filter according to claim 28, wherein

the optical filter is configured for animal vision; and

the pair of polarizing elements that sandwich the retarder stack is at least partially positioned in an animal's field of view.

31. (Previously presented) An optical filter according to claim 28, wherein the FIR filter is a double-notch filter that blocks inter-primary light.

32. (Previously presented) An optical filter according to claim 28, wherein the FIR filter is color neutral.

33. (Previously presented) An optical filter according to claim 28, wherein the FIR filter increases color saturation.

34. (Original) An optical filter according to claim 28, wherein the optical filter is one of a lens, a pair of sunglasses, corrective eyewear, protective eyewear, or a visor.

35-36 (cancelled)

37. (Original) An optical filter for vision comprising:

an input polarizing element;

an output polarizing element; and

a retarder stack between the input polarizing element and the output polarizing element, the retarder stack comprising $N \geq 2$ retarder films;

wherein the input polarizing element, the output polarizing element, and the retarder stack are collectively designed to comprise an FIR filter, and thereby operable to generate at least N+1 spatially offset light pulses in response to a linearly

polarized light impulse input, and are at least partially positioned in a field of view, and filter light to substantially reduce at least one near zero chromaticity response band of light.

38. (Previously presented) An optical filter according to claim 37, wherein

the optical filter is configured for human vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in a human's field of view.

39. (Previously presented) An optical filter according to claim 37, wherein

the optical filter is configured for animal vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in an animal's field of view.

40. (Previously presented) An optical filter according to claim 37, wherein the input polarizing element, the output polarizing element, and the retarder stack, collectively filter light to substantially reduce at least two near zero chromaticity response bands of light.

41. (Original) An optical filter according to claim 37, wherein the input polarizing element, the output polarizing element, and the retarder stack, filter light to substantially reduce at least three near zero chromaticity response bands of light.

42. (Previously presented) An optical filter for vision comprising:

an input polarizing element;

an output polarizing element; and

a retarder stack between the input polarizing element and the output polarizing element, the retarder stack comprising $N \geq 2$ retarder films;

wherein the retarder stack, the input polarizing element, and the output polarizing element are collectively designed to comprise an FIR filter, and thereby are operable to generate at least N+1 spatially offset light pulses in response to a linearly polarized light impulse input and are at least partially positioned in a field of view, and collectively have a light transmittancy at 450 nm, 540 nm and 610 nm that is greater than a light transmittancy at 500 nm or 580 nm.

43. (Previously presented) An optical filter according to claim 42, wherein

the optical filter is configured for human vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in a human's field of view.

44. (Previously presented) An optical filter according to claim 42, wherein

the optical filter is configured for animal vision; and

the input polarizing element, the output polarizing element, and the retarder stack are adapted to be positioned at least partially in an animal's field of view.

45. (Original) A method for improving a person's or animal's vision comprising:

determining an initial spectral profile of the person's or animal's vision;

determining a desired spectral profile for the person's or animal's vision; and

providing eyewear for the person or the animal, wherein the eyewear comprises an input polarizing element, an output polarizing element, and a retarder stack, configured

to substantially filter at least one band of light to compensate for the difference between the desired spectral profile and the initial spectral profile.

46. (Original) A method according to claim 45, wherein the input polarizing element, the output polarizing element, and the retarder stack, substantially filter at least one inter-primary band of light.

47. (Original) A method according to claim 45, wherein the eyewear has a light transmittancy at 450 nm, 540 nm and 610 nm that is greater than a light transmittancy at 500 nm or 580 nm.

48. (Original) A method according to claim 45, wherein the eyewear is a wavelength selective polarizing filter.

49. (Original) A method according to claim 45, further comprising:

selecting a power spectrum of the input polarizing element, the output polarizing element, and the retarder stack, such that color saturation is increased.

50. (Original) A method according to claim 49, wherein the power spectrum is color neutral.

51. (Original) A method according to claim 49, where the power spectrum is selected to improve color deficient vision of the person or the animal.

52. (Original) A method according to claim 45, wherein the input polarizing element, the output polarizing element, and the retarder stack, substantially filter light so as to protect the person's or the animal's vision from harmful light rays.

53. (Original) A method according to claim 45, wherein the input polarizing element, the output polarizing element, and the retarder stack, filter light to substantially reduce at least one near zero chromaticity response band of light.